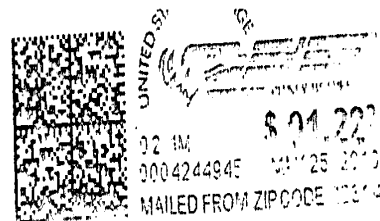


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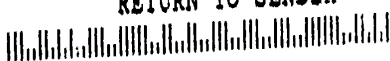


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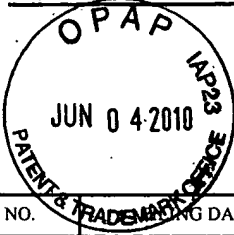
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APPLICATION NO.	FILED DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,021	07/26/2006	Ian Mackinnon	1278-13	6891

7590 05/25/2010
George M Kaplan
DILWORTH & BARRESE
Suite 702
333 Earle Ovington Boulevard
Uniondale, NY 11553

EXAMINER

JOHNSON, KEVIN M

ART UNIT PAPER NUMBER

1793

MAIL DATE DELIVERY MODE

05/25/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/552,021	Applicant(s) MACKINNON ET AL.	
	Examiner KEVIN M. JOHNSON	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 91-115 is/are pending in the application.
- 4a) Of the above claim(s) 97,98,100-107,109 and 110 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 91-96,99,108 and 111-115 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/1/2010</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The IDS submitted 3/1/2010 is identical to the previously considered IDS submitted 10/3/2005. All previously considered references have been lined through, all non-lined through references have now been considered.

Election/Restrictions

2. Claims 97, 98, 100-107, 109 and 110 as amended are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the instant claims as amended are directed to processes employing a zeolite N material while the applicant has elected without traverse claims directed to the Zeolite N material itself.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 97, 98, 100-107, 109 and 110 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 91-96, 99, 108 and 111-115 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen et al. (Acta Chemica Scandinavica, 1997, 51, pp. 969-973) in view of Acara (US 3414602).

In regard to claims 91 and 114-115, Christensen discloses a zeolite N material described by the formula $K_{2.4}Al_2Si_2O_8Cl_{0.4} \cdot H_2O$ (p. 969), which when rewritten in the format required by the instant claims is $K_{12}(Al_1Si_1)_{10}O_{40}Cl_2 \cdot 5H_2O$. It is also taught that zeolite N may be produced with the composition $K_{2.7}Al_2Si_{2.54}O_9Cl_{0.7} \cdot 0.55H_2O$ (p. 969), which rewritten in the format required by the instant claims is $K_{12}(Al_{0.88}Si_{1.13})_{10}O_{40}Cl_{3.1}$

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2.44H₂O. Christensen fails to expressly disclose a material that meets the compositional requirements of the instant claims including that when a=0, b=1, c=1, d=0 and X=Cl M is not selected to be K.

Acara discloses that zeolite N materials may be produced with Si:Al ratios other than 1:1 (column 3, line 51).

It would have been obvious to one of ordinary skill in the art at the time of the invention to produce a zeolite N material of the type disclosed by Christensen where b and/or c are not selected to be 1. Such a modification would have been motivated by the teaching in Christensen that zeolite N type materials do not require that b and c are 1 and the disclosure in Acara that zeolite N materials may be produced where the c/b ratio is not 1.

In regard to claims 92-96, 99 and 108, the material suggested by Christensen and Acara would be the same as the material required by the instant claims, and it would therefore necessarily follow that the material would exhibit the same properties. Similarities may be seen in the x-ray diffraction pattern in figure 3b in Christensen.

In regard to claims 111-113, Christensen discloses a zeolite N material with the composition K_{2.7}Al₂Si_{2.54}O₉Cl_{0.7} 0.55H₂O (p. 969), which rewritten in the format required by the instant claims is K₁₂(Al_{0.88}Si_{1.13})₁₀O₄₀Cl_{3.1} 2.44H₂O. The c/b ratio in this material is 1.28.

It would have been obvious to one of ordinary skill in the art at the time of the invention to produce a zeolite N material of the general type disclosed by Christensen with a c/b ratio in the range required by the instant claims. This modification would be

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motivated by the teaching in Christensen that zeolite N material may have a c/b ratio of 1.28.

Response to Arguments

7. Applicant's arguments with respect to claims 91-96, 99, 108 and 111-115 have been considered but are moot in view of the new ground(s) of rejection.

The new grounds of rejection was necessitated by the amendment to independent claim 91 requiring that when $a=0$, $b=1$, $c=1$, $d=0$ and $X=Cl$ that M can not be K.

8. Applicant's arguments, see page 6, filed 3/1/2010, with respect to the rejections of claims 91-115 under 35 USC 101 and 112, second paragraph have been fully considered and are persuasive. The instant rejection of claims 91-115 has been withdrawn.

Applicant's amendments to the instant claims have overcome the rejections under 35 USC 101 and 35 USC 112, second paragraph.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN M. JOHNSON whose telephone number is (571)270-3584. The examiner can normally be reached on Monday-Friday 9:00 AM to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Mayes can be reached on 571-272-1234. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin M Johnson/

/David M Brunsman/

Application/Control Number: 10/552,021

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Examiner, Art Unit 1793

Primary Examiner, Art Unit 1793

Receipt date ^{Sheet 1 of 6} 03/01/2010

10552021 GAU: 1793

Form PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 1278-13	SERIAL NO.
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)		APPLICANTS Mackinnon et al.	
		FILING DATE October 3, 2005	GROUP ART UNIT

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	3306922	2/67	Barrer et al.			
	3414802	12/68	Acara			
	2998338	8/81	Milton			
	4091879	3/78	Vaughan			
	6218329	4/81	Singh			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	1039345	8/66	Great Britain				

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

		Barrer et al., "The Hydrothermal Chemistry of the Silicates. Part III, Reactions of Analcite and Leucite," JOURNAL OF THE CHEMICAL SOCIETY, 1953, PP 1466-1475.
		Barrer et al. "The Hydrothermal Chemistry of the Silicates. Part VII, Synthetic Potassium Aluminosilicates," JOURNAL OF THE CHEMICAL SOCIETY, 1956, PP 2882-2891.
		Barrer et al., "The Hydrothermal Chemistry of the Silicates. Part XV, Synthesis and Nature of Some Salt bearing Aluminosilicates," JOURNAL OF THE CHEMICAL SOCIETY, 1970, pp 2735-2745.
		Christensen, et al., "Crystal Structure Determination of Zeolite N from Synchrotron X-Ray Powder Diffraction Data," ACTA CHEMICA SCANDINAVICA, Vol. 51 (1997), pages 969-973.
		Christensen et al., "Neutron Powder Diffraction Study of the Dehydration of Zeolite N," ACTA CHEMICA SCANDINAVICA, Vol. 53 (1999), pages 85-89.

EXAMINER /Kevin Johnson/	DATE CONSIDERED 05/19/2010
* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

{Form PTO-1449 [6-4]}

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.J./